Check out what CC&E was up to this summer!

LSU | College of the Coast & Environment

August 24, 2017

From Dean D'Elia

Alumni, students and friends,

Welcome back students and faculty! What an exciting summer it has been for the College. Just a few of our highlights include:

- Students and faculty studied in Tanzania, China and Australia and lots of places in between.
- In August, we graduated the next class of coastal and environmental scientists - and even had a husband and wife from China receive their Ph.D.s from our College.
- Our faculty was in the local and national news for their research findings, indicating how the College continues to be at the forefront of today's most pressing coastal and environmental issues.
- We received much appreciated philanthropic donations, including a special gift from the Turner Family Foundation.
- Effective this semester, we now offer a new minor in Environmental Toxicology. This plus our new concentration in Environmental Health announced in March 2017 provide LSU students with more options to advance their careers.

It's great to see our fall classes underway, kicked off with the introduction of LSU's new Mike VII mascot, introduced into his new habitat, and–of course–the partial solar eclipse on Monday. We hope this remarkable start transitions into a successful, inspirational semester for you all.

Geaux Tigers!

Sincerely,

Christopher F. D'Elia

Christopher F. D'Elia, Ph.D.
Professor and Dean

Want to learn more about CC&E?

Supporters and potential supporters of the
College of the Coast & Environment are invited to a
presentation and tour of the College.

Contact Kathe Falls for details at **kfalls1@lsu.edu**

CLICK HERE TO GIVE

Thank you for your support!

Gulf of Mexico Dead Zone in Need of Bold New Approaches

In a paper recently published in the *Proceedings of the National Academy of Sciences*, a team of researchers, including CC&E faculty, conclude that "shrinking the annual Gulf of Mexico Dead Zone down to the size of Delaware will require a 59 percent reduction in the amount of nitrogen runoff that flows down the Mississippi River from as far away as the Corn Belt."

Researchers state that the goal is attainable, but achieving it will require innovative, large scale approaches to limit upstream farmland runoff, the main source of the nitrogen and phosphorus that cause the Gulf of Mexico hypoxic zone.

Pictured: CC&E Professor Nancy Rabalais and Postdoctoral Researcher Matt Kupnick deploy an oxygen meter to measure oxygen concentrations within one foot of the seabed in the Gulf of Mexico. Rabalais has recorded oxygen from more than 100 stations on 7-10 day cruises since 1985.

Read more.

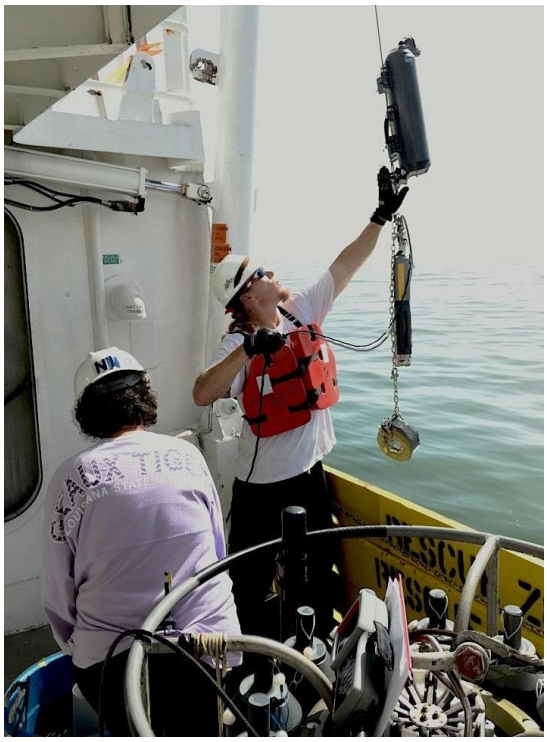


Photo credit: Eugene Turner.

In the News

WATCH Prof. Nancy Rabalais discuss her hypoxia research on **CBS This Morning**.

NOAA RESTORE Grant Awarded to CC&E-led Team

In July, NOAA's RESTORE Science Program awarded a

group of researchers led by CC&E Assistant Professor Michael Polito a grant to study how current coastal land loss restoration practices impact marsh food webs. The grant is one of several competitive federal grants funded from penalties paid by parties responsible for the Deepwater Horizon oil spill.

Photo credit: Erick Swenson.

The project, titled, "Linking community and food-web approaches to restoration: An ecological assessment of created and natural marshes influenced by river diversions," aims to increase the understanding of the marsh ecosystem and assist agents responsible for managing and restoring coastal resources.

Other CC&E team members include Associate Professor Linda M. Hooper-Bui, Professor Nancy N. Rabalais, and Research Associate Erick Swenson. The team also includes researchers from Rutgers University, University of Florida, University of Tennessee-Knoxville, Michigan Technological University; and Louisiana Universities Marine Consortium, or LUMCON.

Read more.

CC&E Summer 2017 Graduates

CC&E congratulates its Summer 2017 graduates and wishes them well in their future endeavors.

Doctor of Philosophy

Laura Marie Basirico, Oceanography & Coastal Sciences
Advisors: Robert Gambrell & Ralph Portier
Dissertation Title: *Ecotoxicological Assessment of Polycyclic Aromatic Hydrocarbons in Mississippi Rover Coastal Watershed and Offshore Shoaling Regions of the Northern Gulf of Mexico*

Heng Cai, Department: Environmental Sciences
Advisor: Nina Lam
Dissertation Title: *Assessing and Modeling Community Resilience to Coastal Hazards Using a Bayesian Network*

Tammara Levey Estes, Environmental Sciences
Advisor: Kevin Armbrust
Dissertation Title: *Revisions to Rainfall Intensity Algorithms in PRZM5.0 to Improve Estimates of Off-Field Runoff, Eroded Sediment and Pesticide Mass*

Ishan Dilipbhai Joshi, Oceanography & Coastal Sciences
Advisor: Eurico D'Sa
Dissertation Title: *Estuarine Water Quality and Dynamics in the Northern Gulf of Mexico Using Field and Satellite Observations*

Hannah Paula Rockett, Environmental Sciences
Advisor: Ralph J. Portier
Dissertation Title: *An Assessment of Metal Profiles in Sediments from Mississippi Rover Estuaries and Offshore Shoaling Regions*

Lei Zou, Environmental Sciences
Advisor: Nina Lam
Dissertation Title: *Mining Social Media Data for Improved Understanding of Disaster Resilience*

Master of Science - All from the Dept. of Oceanography & Coastal Sciences

Katherine M. Abbott - Advisor: Tracy Quirk

Natalie Ceresnak - Advisors: Brian Roberts & Eugene Turner

Jessica Jean Johnson - Advisor: Michael J. Polito

Fredrick Donald Marin - Advisors: Malinda M. Sutor & Rick Shaw

Shima Massiha - Advisor: Nan Walker

Jeffrey Scott Rutherford - Advisors: John W. Day & Christopher D'Elia

Robert Wiegman - Advisor: John Day

Sarah Elizabeth Wood - Advisor: John R. White

Zou, Cai Share More than Alma Mater

On August 4 the College of the Coast & Environment was pleased to see two doctoral students, who also happen to be married, obtain their Ph.Ds. in environmental sciences. Lei Zou and Heng Cai are international doctoral students from Wuhan in the Hubei province and Lu'an in the Anhui province. Earlier this year, Zou teamed up with LSU's flash mob krewe Kryptonite to propose to Cai.

The couple is working under the guidance of their advisor, Nina Lam. Zou's research interests are in big geospatial data analysis, coupled natural-human system modeling, resilience assessment and water color remote sensing. His dissertation is titled, "Mining Social Media Data for Improved Understanding of Disaster Resilience."

Cai's research interests focus on geospatial modeling of coupled natural-human systems, community resilience to hazards, coupled natural-human system, and environmental risk assessment and modeling. For her dissertation, "Assessing and Modeling Community Resilience to Coastal Hazards Using a Bayesian Network," she aimed to understand the interactions among key resilience variables from both the natural and human components, in the context of recurring coastal disasters, in the Lower Mississippi River Basin.

After graduation, both Zou and Cai plan to continue post-doctoral research with Lam. "I am fortunate to have an opportunity to work with two very talented and delightful students, and I look forward to working with them in the coming year," said Lam.

South Central Climate Center Interns Visit LSU

On July 10, CC&E Dean Chris D'Elia and College of Humanities and Social Sciences Dean Stacia L. Haynie welcomed South Central Climate Science Center summer interns participating in the center's undergraduate underrepresented minorities summer program. During the internship, which took place July 9-29, participants from New Mexico, Texas, Oklahoma, Kansas, and Louisiana visited LSU and traveled throughout Louisiana to learn about climate-related issues facing the state and the research being done to address those concerns.

Read more.

Turner Family Foundation Contributes to CC&E's New Distinguished Dean Professorship Fund

The College of the Coast & Environment, or CC&E, is pleased to announce that the Turner Family Foundation has made the initial contribution to establish an endowed Distinguished Dean Professorship fund. Once fully funded, the endowment will provide a margin of excellence in attracting and retaining world-class leadership to continue the momentum of leading CC&E.

"Having an endowed professorship for the dean's position will provide a critical tool in leading Louisiana's coastal efforts," said Richard White, dean, E.J. Ourso College of Business. "Once fully funded, this position will enable the dean to conduct his/her own research and continue publishing. It provides the scientific community with the benefit of the dean's knowledge and simultaneously provides the college with administrative leadership, guidance and strategic direction."

Through the generous support of the Turner family, the LSU College of the Coast & Environment has enhanced the collegiate experience for our students, as well as the quality of research conducted at the college. The Bert Turner Memorial Scholarship, established in 2009 by Martin and Mary "Moo" Turner Svendson, provides support for full-time undergraduates at LSU in the College's Coastal Environmental Sciences Bachelor of Science program. It has helped Coast & Environment to add an extra margin of excellence that makes our College a magnet for talented, dedicated students - all in memory of Mr. Turner and his interest for the coast, environment and fisheries.

The Turner Family Foundation's support of the Distinguished Dean Professorship fund is another way that this family continues to make a tremendous difference to the students and faculty of LSU's College of the Coast & Environment.

For more information, contact Kathe Falls at **kfalls1@lsu.edu**.

NAS Fellowships Awarded

Reeves is a native of Fairhope, Ala.

David Reeves, Ph.D. candidate in the Department of Oceanography and Coastal Sciences, is one of six National Academies of Science Gulf Research Program 2017 Science Policy Fellows. Reeves holds an M.S. in oceanography and coastal sciences from LSU and a B.S. in biological sciences from Loyola University, New Orleans. Reeves is broadly interested in fisheries ecology, restoration, endangered species management, and the interconnectedness of human and natural systems in the Gulf of Mexico. His current research focuses on evaluating the ecological value of oil and gas platforms as habitat for reef-associated organisms. Reeves is finishing his dissertation research under the mentorship of Ed Chesney, associate professor at Louisiana Universities Marine Consortium (LUMCON) and adjunct associate professor at Louisiana State University.

National Academies of Science, Gulf Research Program also supports Early-Career Research Fellowships. One of 10 such fellows for 2017 is **J. Cameron Thrash**, Department of Biological Sciences, LSU. Thrash focuses on the function of microbes in the different interconnected aquatic systems within the Gulf of Mexico, including the coasts, estuaries, the shelf region, and the Mississippi River. He aims to be able to predict which microbes contribute, and how they contribute, to the vital ecosystem services of nutrient and carbon processing to generate strategic options for pollutant remediation. His mentor is **Nancy N. Rabalais**, professor and Shell Endowed Chair in the Department of Oceanography and Coastal Sciences, with whom he has been studying the microbial communities associated with oxygen-depleted waters of the northern Gulf of Mexico.

These competitive NAS Gulf of Mexico Program awards are among a suite of program activities aimed at supporting the development of future generations of scientists, engineers, and health professionals prepared to work at the intersections of oil system safety, human health and well-being, and environmental stewardship in the Gulf of Mexico and U.S. outer continental shelf regions.

Forsyth Interns at Ga. Sea Turtle Center

Sea Turtle Tagging, Nest Excavation for Summer Vacation

By Nicole Butler, CC&E graduate assistant

Very few people get the chance to work with sea turtles along a beach during their summer vacation, but coastal environmental sciences senior Leah Forsyth did just that.

From May to August, Forsyth was given the amazing opportunity to intern on the Sea Turtle Patrol Team at the Georgia Sea Turtle Center on Jekyll Island. Each night, from 9 p.m. until 6 a.m., the team's main objective was to patrol the beach looking for nesting female loggerhead sea turtles.

"Being able to meet these turtles, watch them nest, and then see their hatchlings go back into the ocean was an amazing, once in a lifetime experience that I will never forget," said Forsyth.

Read more.

NSF Fellow Returns from China

Over the summer, environmental sciences Ph.D.

student Grace Cagle spent two months in China performing research related to her Ph.D. as part of a fellowship with the National Science Foundation.

During her eight-week stint, Cagle studied the population dynamics and activities of methane-cycling organisms in an in-situ warming experiment in a Northern permafrost peatland and conducted experiments in the laboratories of the Wetlands and Global Change group at the Northeast Institute in northern China.

She also "had a few Chinese lessons and did tourist activities, like visit the Forbidden City, hike the Great Wall, and eat the famous Peking duck."

Read more of Cagle's experiences in China, in her own words.

CC&E welcomes its newest Dept. of Oceanography & Coastal Sciences (DOCS) graduate students.

CC&E Offers New Minor in Environmental Toxicology

Starting this semester, the College offers a minor in **environmental toxicology**. To earn the minor, students must complete the following 12 hours of coursework:

- ENVS 4101 Environmental Chemistry (3)
- ENVS 4477 Environmental Toxicology: Introduction and Applications (3)
- and **two** of the following courses: ENVS 4007, ENVS 4010, ENVS 4035, ENVS

4036, ENVS 4045, ENVS 4500 and ENVS 4113.

All ENVS courses must be passed with a "C" or better. A residency requirement of nine hours of credit must be earned at LSU to receive the minor in environmental toxicology.

Scholarships Available to Students Interested in Hydrographics, Related Fields

The Southeast Chapter of The Hydrographic Society of America is now offering five $1,000 scholarships to students enrolled full-time (12 credits/semester), in a two-year, four-year or a graduate program and who demonstrate a keen interest in pursuing a career in hydrographic surveying or related fields, or high school seniors accepted in to a U.S. college or university located in Louisiana, Mississippi, Alabama or Florida, with accreditation recognized by the U. S. Department of Education.

Students must demonstrate a keen interest in pursuing a career in hydrographic surveying or related fields. Applicants must be citizens or permanent residents of the U.S.

Application deadline: **November 30, 2017**.
Scholarships will be awarded at the end of December 2017.

For more information or to request a scholarship application please contact Mike Nitska at southeast@thsoa.org.

Fall 2017 @ CC&E

Things are definitely looking up!

Eclipse at the Energy, Coast & Environment Building
Monday, August 21, 2017

UPCOMING EVENTS

Coast & Environment Graduate Organization (CEGO)
Fall 2017 Seminar Series

All seminars 11:30 -12:30
Dalton J. Woods Auditorium
Energy, Coast & Environment Building

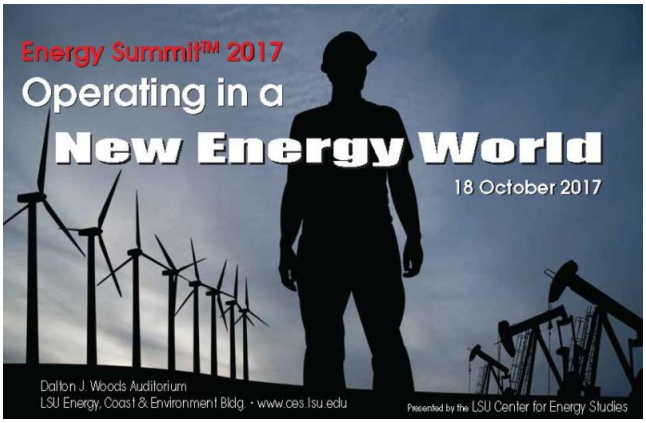
September 1
Graduate Student Presentations
"Mzungus Out of the Water" *by Mario Hernandez & Matt Robertson*
"Ecotoxicological Analysis of Pesticides on Various Aquatic Organisms: Impacts Sunlight and Salinity Impose" *by Emily Verbrosky*
"The Coriolis Force Not Discussed in OCS4170 and Its Effect on Upper Ocean Mixing" *by Jinliang Liu*

September 8
"Fish, Flows, and Feedbacks: Understanding Animal Mediated Material Flows at the Ecosystem Scale"
Jimmie Nelson, Assistant Professor, Department of Biology
University of Louisiana Lafayette

September 15
"Evolution to the Rescue? Research on Adaptation to Stressors (Metals, Heat) in Aquatic Organisms"
Paul Klerks, Professor, Department of Biology
University of Louisiana Lafayette

Energy Summit™ 2017 Set for October 18

The Center for Energy Studies will host its annual Energy Summit™ on Wednesday, October 18, 2017, at the Dalton J. Woods Auditorium in the LSU Energy, Coast & Environment Building. The theme for this year's event is "Operating in a New Energy World."



This year, the Center is pleased to feature guest speaker, John Wasik, award-winning journalist and author of ***Lightning Strikes: Timeless Lessons in Creativity from the Life and Work of Nikola Tesla.*** Presented by Campanile Charities, Wasik will discuss how Tesla's visionary works continue to have global influence in energy development.

The Energy Summit™ program will include speakers from a wide range of professional experiences and backgrounds, addressing such important forward-looking questions as

- What is the outlook for global energy prices, and what role will U.S. energy supply play in the global market place?
- How will cybersecurity challenges impact future critical energy infrastructure operations and development?
- How will federal policies and executive agency actions impact domestic energy?
- Do we have enough skilled labor to maximize the unconventional revolution?
- How will distributed generation dramatically impact power sector configurations, operations, and costs?
- How are recent critical energy infrastructure investments impacting and changing the Louisiana energy landscape?

For more information, visit the Energy Summit 2017 webpage.

CC&E ALUMNI -- New job? New location? We want to hear from you!
Send your Alumni Update to **kfalls1@lsu.edu**

STAY CONNECTED: